United States
Office of Personnel Management

FWS Job Grading Standard for

Aircraft Mechanic

8852

TS-5, 2/69

Workforce Compensation and Performance Service
Classification Programs Division
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COVERAGE OF STANDARD

This standard is used to grade all nonsupervisory jobs involved in the maintenance and repair of fixed and rotary wing aircraft systems, airframes, components, and assemblies. Aircraft worked on include a variety of models, are single and multi-engine types, and have reciprocating and jet engines.

WORK NOT COVERED BY THIS STANDARD

Jobs involved in the maintenance and repair of single aircraft systems (for example, electrical, electronic), or doing specialized aircraft work (for example, propeller overhaul, engine rebuilding) are not graded by this standard.

TITLES

Jobs covered by this standard below the grade 10 level are to be title *Aircraft Worker*. Jobs covered by this standard at the grade 10 level and above are to be titled *Aircraft Mechanic*.

GRADE LEVELS

This standard does not describe all possible levels at which jobs might be established. If jobs differ substantially from the skill, knowledge, and other work requirements described in the grade levels of the standard, they may warrant grading either above or below those grades.

HELPER AND INTERMEDIATE JOBS

Jobs that are part of a planned program of training and development for advancement to a higher grade are graded by the job grading standards for Trades Helper and Intermediate Jobs. (Grade 10 in this standard is to be used as the "journey level" in applying the Intermediate Job Grading Table.)

8852-8 AIRCRAFT WORKER 8852-8

General: The work at this grade involves making repairs that can be accomplished by removing, cleaning, reinstalling, or replacing defective parts, accessories, and components such as worn gaskets, couplings, and fittings, bad actuators, accumulators, and gauges, sections of corroded fuel and oil lines, worn cable pulleys, frayed spark plug cables, and burned-out landing lights.

Grade 8 aircraft workers locate worn, dirty, or poorly adjusted parts, accessories, and components through visual check. They complete needed repairs like those described above, and make adjustments and settings such as cable tension, and seat movement settings and adjustments.

Skill and Knowledge: At this grade, the aircraft workers must have a knowledge of where and how a variety of parts, accessories, and components, such as couplings, spark plug cables, seat tracks, and accumulators, are installed. They must have the ability to determine when parts and components should be cleaned and reinstalled, or replaced with standard parts and components. They must have the skill needed to remove and replace parts, accessories, and components, and to make adjustments and settings, such as cable tension and actuator travel, according to established specifications. The aircraft workers also require skill in the use of common handtools, for example, pliers, wrenches, and screwdrivers.

Responsibility: A higher grade worker or supervisor assigns work orally or through work orders. The aircraft workers select tools, decide on methods and techniques to use, and carry out assignments with little check during their progress. They obtain standard parts, such as fuel and oil line connections and fittings, cable linkages, and spark plug cables and harnesses, by looking up replacement information in parts manuals and by making comparisons with samples. They insure that adjustments and settings, such as takeup on connections, seat travel, and cable tension, meets established requirements by checking and following the specifications called for in repair and manufacturer manuals. A higher grade worker gives advice on unusual problems. For example, when normal installation and adjustment procedures and established specifications fail to give the expected result, a higher grade worker or supervisor suggests other repair procedures or adjustments that can be tried. The higher grade worker or supervisor also checks to see that completed work meets requirements.

Physical Effort: The aircraft workers make repairs from work stands, and where parts worked on are in hard-to-reach places. This requires them to climb, stand, stoop, bend, stretch, and work in tiring and uncomfortable positions. The aircraft workers frequently lift parts and equipment that weigh up to 9 kilograms (20 pounds). Occasionally, they may lift and carry items that weigh about 23 kilograms (50 pounds).

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Working Conditions: The work at this grade is done inside and outside. Inside areas are drafty and noisy, and fumes are usually present. The aircraft workers may make some repairs outside in bad weather. Dirt, dust and grease, are almost always present. Aircraft fluids, such as oil and hydraulic fluids, may irritate the eyes or skin. There is frequent exposure to the possibility of cuts, burns, shocks, strains, and broken bones.

8852-10 AIRCRAFT MECHANIC 8852-10

General: The work at this grade involves making repairs to a variety of systems, assemblies, and surfaces such as hydraulic, oil, fuel, and pressurization systems, landing gear assemblies, ailerons, and flaps.

Grade 10 mechanics use test stands and cockpit gauges, instruments, and controls as well as visual checks to troubleshoot (trace and locate) defects and determine the type and extent of repair needed. They install, aline, and adjust whole new systems, assemblies, and surfaces (like those described above) as needed, or repair them by installing and adjusting all defective components and parts such as complete cable riggings, rudder pedals, pumps, and controls. They connect up related systems, such as the hydraulic and cable systems, to the newly-installed or repaired units, and make adjustments to the units and their related mechanisms that assure their proper operation.

In comparison with Grade 8, the mechanics at grade 10 must have a greater knowledge of how the various systems, assemblies, and surfaces fit and work together, knowledge of a wide variety of test procedures, and skill in tracing hard-to-locate defects or problems. Grade 10 mechanics determine the repairs needed and do the work with little or no advice. The supervisor checks their work only to see that it meets accepted trade standards.

Skill and Knowledge: At this grade, the mechanics must have knowledge of the makeup, operation, and installation of a variety of systems, assemblies, and surfaces such as fuel and hydraulic systems, landing gear assemblies, and elevators. Because of the complicated ways in which assemblies, systems, and surfaces are installed, fit, and work together the grade 10 mechanics must have more ability than grade 9 aircraft workers to determine when new surfaces, assemblies, and systems should be installed, when systems, assemblies, and surfaces can be repaired through replacement of new parts and components, and the types and extent of adjustment and alinement required. The mechanics must have skill in the removal, replacement, and adjustment of various systems, assemblies, and surfaces or any of their components and parts. They must also have skill in connecting, meshing, aligning, and adjusting the surfaces, assemblies, and systems with one another, for example, meshing the propeller assembly with the engine, hooking up and adjusting fuel and oil systems for proper flow, injection, and pressure, and setting engine timing. The mechanics must have skill in the use of jigs, fixtures, templates, precision dial and feeler gauges, and common handtools. They must also have skill in the use and read-out of powered ground equipment, test stands, and cockpit instruments and gauges.

Responsibility: The supervisor assigns work orally or through work orders. The mechanics determine the type and extent of repair needed, and completes repairs with little or no check during their progress or upon completion. They make installations, alignments, and adjustments of the various systems, assemblies, and surfaces according to specifications in repair and manufacturer manuals. For example, they install rudders and elevators on fixed surfaces, hooks up related control systems such as cable rigging and pulley systems, and make adjustments to

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controls, pedals, systems, and surfaces according to required operating specifications. Grade 10 mechanics make more difficult installations, alignments, and adjustments than grade 8 aircraft workers in that they must be able to install and make all necessary hookups and connections between a wide variety of systems, assemblies, and surfaces as well as to any of the individual parts and components involved. The supervisor insures that overall work meets accepted trade standards.

Physical Effort: Physical effort required at this grade is the same as that described at grade 8.

Working Conditions: Working conditions at this grade are the same as those described at grade 8.